

Comparison of the Effect of Rivaroxaban and Enoxaparin on Deep vein thrombosis (DVT) prophylaxis in Pelvic Surgeries - Systematic Review and Meta-Analysis

Abstract

Background and objective: Prophylactic anticoagulant therapy after total hip arthroplasty is a recommended procedure after surgery. Since the prophylactic anticoagulant effects of enoxaparin and rivaroxaban after hip arthroplasty have been evaluated in various studies, we decided to systematically review and compare the effect of rivaroxaban with enoxaparin on CVT after arthroplasty.

Methods: This study was a systematic review and meta-analysis study that conducted a search strategy based on PubMed, SCOPUS and Science Direct databases using keywords such as rivaroxaban, enoxaparin, DVT, THA and thromboembolism. The studies were limited to Farsi and English, and the search was conducted in the period 2000–2018. Consoart checklist was used to check the quality of articles. Variables such as blindness, randomness were considered. Data were analyzed in Revman 5 software. I^2 and χ^2 were used to determine heterogeneity.

Results: Overall, 499 articles were found. There were 388 articles left after repeated articles were deleted. After reviewing the inclusion criteria, finally 10 articles with meta-analysis inclusion criteria were included. I^2 , which indicates the heterogeneity of the study was 66%, indicating low heterogeneity of the study, and reflects the obtained estimates with high result. The results showed that Enoxaparin recipients were significantly more likely to develop DVT than patients receiving rivaroxaban. The results showed that enoxaparin recipients were significantly more likely to develop DVT than patients receiving rivaroxaban.

Conclusion: Since rivaroxaban has been identified as a more effective drug, it is recommended to use it because of its more protective effect in pelvic surgery discussions.

Keywords: rivaroxaban, enoxaparin, total hip arthroplasty, deep vein thrombosis